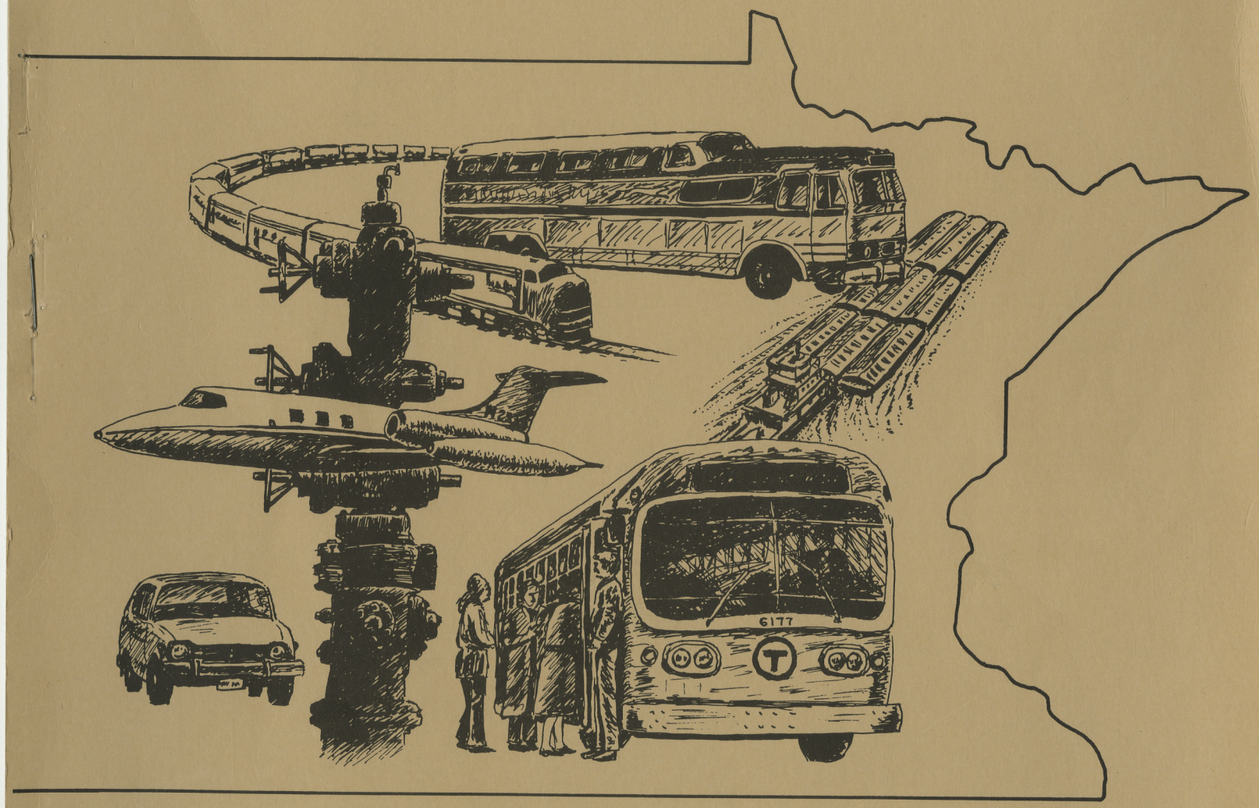
~ COMPLETE ~

Transportation Analysis

S.P. 2789-01 (I-394)
Year 2000 Forecast in the
Vicinity of the 3rd Avenue
Distributor Addendum to TAR M-253

3182



PREPARED BY
THE MINNESOTA DEPARTMENT OF TRANSPORTATION
PLANNING DIVISION
PEOPLE AND GOODS MOVEMENT SECTION

SF-00006-02

STATE OF MINNESOTA

DEPARTMENT OF TRANSPORTATION
Room 820

Office Memorandum

TO : Carl J. Hoffstedt
Transportation Planning Engineer
District 5 - Golden Valley

DATE: March 23, 1982

FROM : John H. Sem
Director, Office of
Transportation Studies

PHONE: 6-1602

SUBJECT: S.P. 2789-01 (I-394)
Year 2000 Forecast in the
Vicinity of the 3rd Avenue
Distributor Addendum to TAR M-253

3/82

The attached Year 2000 volumes for I-394 from Wayzata Boulevard to Washington Avenue in Minneapolis should be used in place of those in TAR M-253. These volumes have been updated to incorporate the latest available information. This includes the following factors:

1. The Metropolitan Council's latest year 2000 traffic forecasts reflect a Minneapolis CBD employment figure of 115,000 rather than the 87,000 used in the previous forecasts. This leads to an increased number of trips into and out of the CBD, particularly in the peak hours (work trips).
2. Peak hour assignments are developed as a percentage of the ADT. Recent counts on both TH 12 and I-35W indicate a much higher peak hour percentage entering the CBD than is shown in TAR M-253. The updated volumes in this addendum reflect the actual condition of a peak hour percentage approaching 15% as you enter the CBD (east of the Hawthorne Interchange).
3. TAR M-253 was based on the concept of separated HOV lanes the entire length of the corridor. Since that time, the design has been changed to include diamond lanes west of TH 100 and reversible lanes east of TH 100.
4. The factors for specific traffic forecast breakdowns from previous reports can be used with this addendum.

Attachment 1

cc: R. D. Borson/A. E. Pint

I-394, 3rd Ave. Distributor Traffic Synopsis

In response to some questions raised by Steve Bahler of FHWA concerning the Interstate funding eligibility, the following traffic analysis is made concerning the traffic forecasts as they relate to the design and subsequently to funding.

An April of 1972 SPAR, M-99, contained traffic forecasts for the year 1995 on the I-394 (T.H. 12) 3rd Ave. Distributor. The SPAR contained several study alternative traffic assignments. Study A was based on System 14 and showed a traffic forecasted volume of 36,300 ADT, 1-way for T.H. 12 E.B. destined for the CBD. The A.M. Peak Hour Volume was 5,060. The two way ADT for the segment was 64,900 and this figure was used in the Final E.I.S.

SPAR M-99 also contained a Study E traffic assignment which was most similar to Layout 12A for the 3rd Ave. Distributor. The Study E assignment was based on System 16 and showed a year 1995 traffic volume for T.H. 12 E.B. of 24,750 ADT destined for the CBD. The A M. Peak Hour Volume was 3,333. The two way ADT for the segment was 47,520.

Now System 14 contained the Southwest Diagonal and System 16 did not. This probably accounts for the traffic forecast volume difference on the 3rd Ave. Distributor between the two systems. The Diagonal, of course, is no longer being proposed.

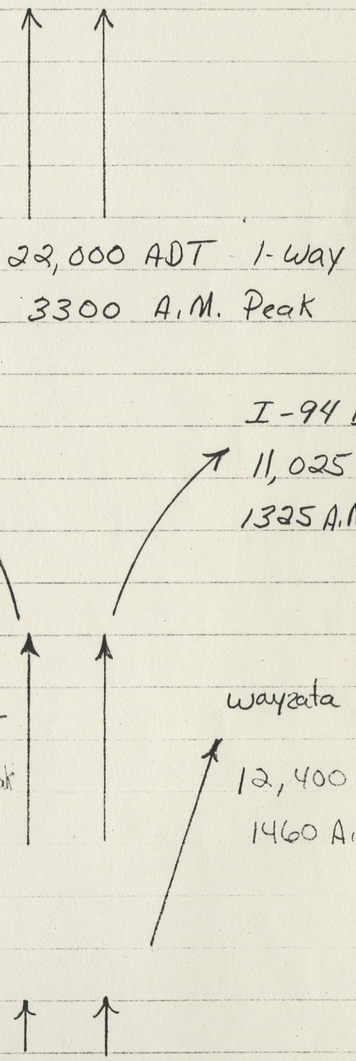
In June of 1978, SPAR M-202A was produced based on the new Metropolitan Council System forecasts. For the same segment of the 3rd Avenue Distributor discussed in relation to Systems 14 and 16, the report showed the year 2000 T.H. 12 E.B. traffic forecasted volume to be 22,000 ADT and a Peak Hour Volume of 3,300 in the A.M. Peak Hour. The two way ADT was 44,000 which compares quite favorably with the System 16 assignment used on the layout. The Metropolitan Council System did tend to underassign the trips destined to the CBD because of under estimating the CBD employment. This probably accounts for the difference between System 16 and the Metropolitan Council System.

In SPAR M-202A, the % of mainline traffic destined to the CBD compares quite well with the current situation on I-35W. The attached Figure 1 shows the T.H. 12 E.B. traffic assignments and Figure 2 shows the I-35W situation.

Because of the HOV concept for I-394, another traffic report was necessary. This report, TAR M-253, was produced in August of 1980 and reflected the HOV concept plus showing a different traffic assignment for I-94 E.B. TAR M-253 is based on the new Metropolitan Council System forecasts, project and Council Staff input. The net result was a significant change in traffic assignments on the 3rd Ave. Distributor. The same segment previously discussed shows a year 2000 traffic volume for T.H. 12 E.B. of 13,350 ADT 1-way and an A.M. Peak Hour Volume of 1110. The two way ADT for the segment would be 26,700.

Figure 1 – T.H. 12 E.B. YEAR 2000 Traffic Forecasts at Hawthorne Interchange Area

SPAR M-202A
dated 6/22/78
based on new
Metropolitan Council
System Forecasts

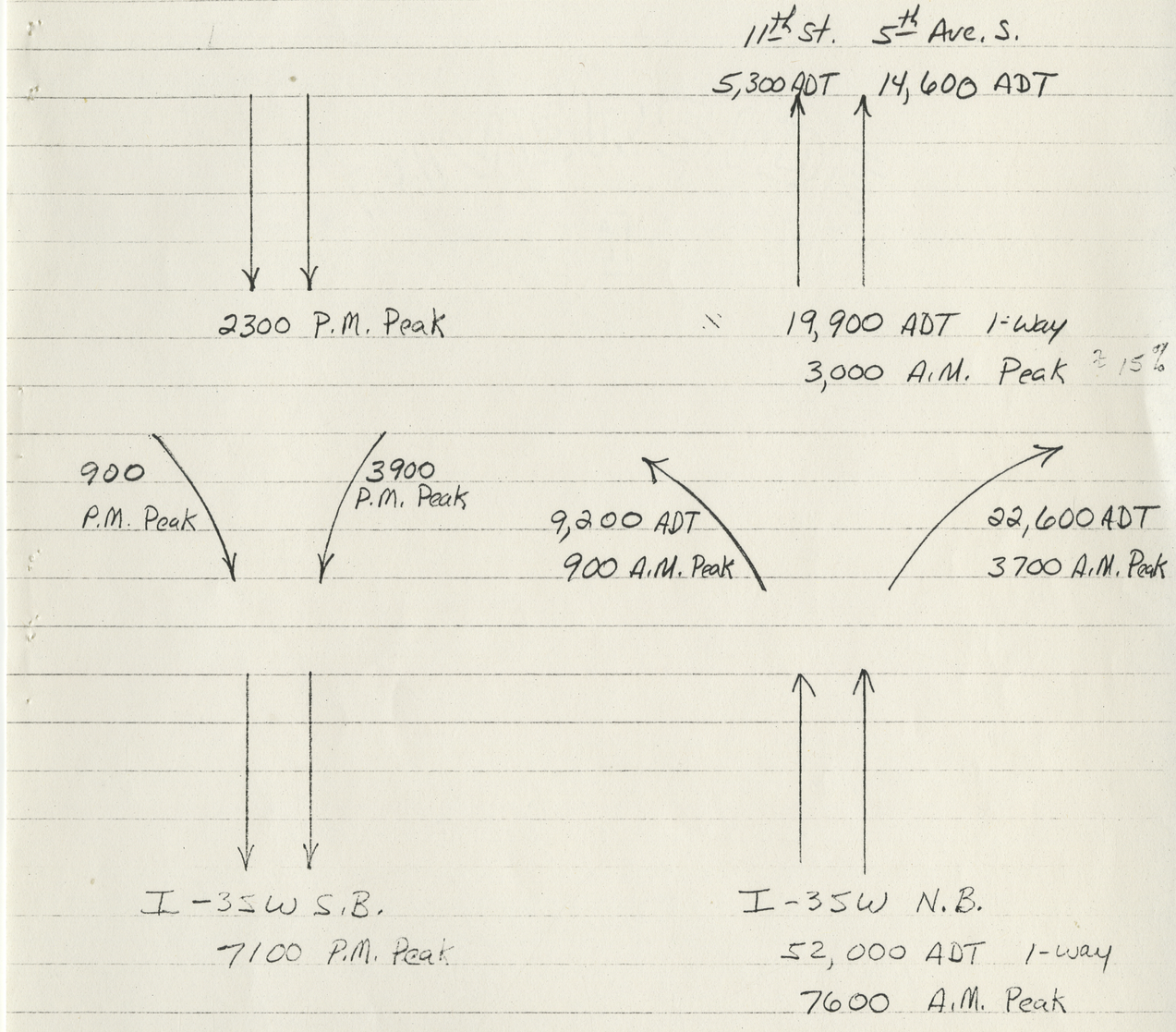


I-94 E.B. split is 25% of T.H. 12 E.B. traffic after Wayzata Blvd. exit.

Year 2000 – 56,450 ADT 1-way
7185 A.M. Peak

39% of T.H. 12 E.B. traffic is destined to CBD - 50% after

Figure 2 – I-35W Current Traffic Split at Central Interchange Area



32% of the I-35W S.B. traffic came from the CBD

39% of I-35W N.B. traffic is destined to CBD - Under normal traffic conditions there is no traffic back on the CBD exits in the A.M. Peak Hour.

The significant decrease can be attributed to three factors:

1) Metropolitan Council System under assignment of CBD trips.

2) The HOV concept.

3) The change in traffic assignment from previous reports in the T.H. 12 E.B. to I-94 E.B. traffic movement.

Figure 3 shows the HOV, TAR M-253 traffic splits.

Previous Layout submittals to FHWA have been Layouts 12, 12A & 15. The following Layouts were submitted to FHWA:

Layout #	Date	FHWA	System	Report #	ADT 1-Way	PH 1-Way
Layout 12	7-15-70	No response	14(1985)	Tall-600A-14	26,000	3,800
Layout 12A	5-13-71	O.K. to use at hearing	14(1985)	M-47	26,000	3,030
Layout 15	11-07-78	No response	MC	M-202	22,000	3,300

Layouts 12 and 12A contained System 14, 1985 traffic forecasts which showed 3,800 in the T.H. 12 E.B. Distributor A.M. Peak Hour. Since 1985 is only three years away and since attached 1978 counts showed the A.M. Peak Hour to be 1,535, the 3,800 forecast seems to be high. Layout 15 was submitted and contained SPAR M-202A forecasts which were reflective of the Layout 12A traffic forecast volumes. SPAR M-253 volumes were submitted in a Design Study Report and the layout design was then questioned by the FHWA.

In reviewing the 3rd Avenue Distributor traffic volume forecast differences between M-202A and M-253, it seems that the M-202A splits and peak hour percent are more realistic than M-253. This is due to the increased CBD employment forecasts by Metro Council and the June, 1978 traffic counts. As you remember the M-202A splits and peak hour percent compared quite favorably to the I-35W situation. By using the M-202A split and peak hour information, the, Figure 4, June, 1978 counts and the I-35W information, one could logically apply the percentages to M-253 (HOV) traffic forecasts. If one were to say that 40% of the T.H. 12 E.B. one way ADT were destined to Mpls CBD and if one were to say that the 3rd Avenue Distributor peak hour was similar to I-35W extension peak hour, then the 3rd Ave. Distributor one way ADT and peak hour volume would approach that shown in M-202A (40% x 51,210=20,484 one way ADT x 15%=3,073 A.M. Peak Hour). The increased Mpls. CBD employment forecasts directly impact the splits and peak hour situation; therefore, the percentages are reflective of the work trip pattern. Figure 5 shows the logical analysis to be applied in an addendum to M-253.

Figure 3 – T.H. 12 E.B. YEAR 2000 Traffic Forecasts at Hawthorne Interchange Area

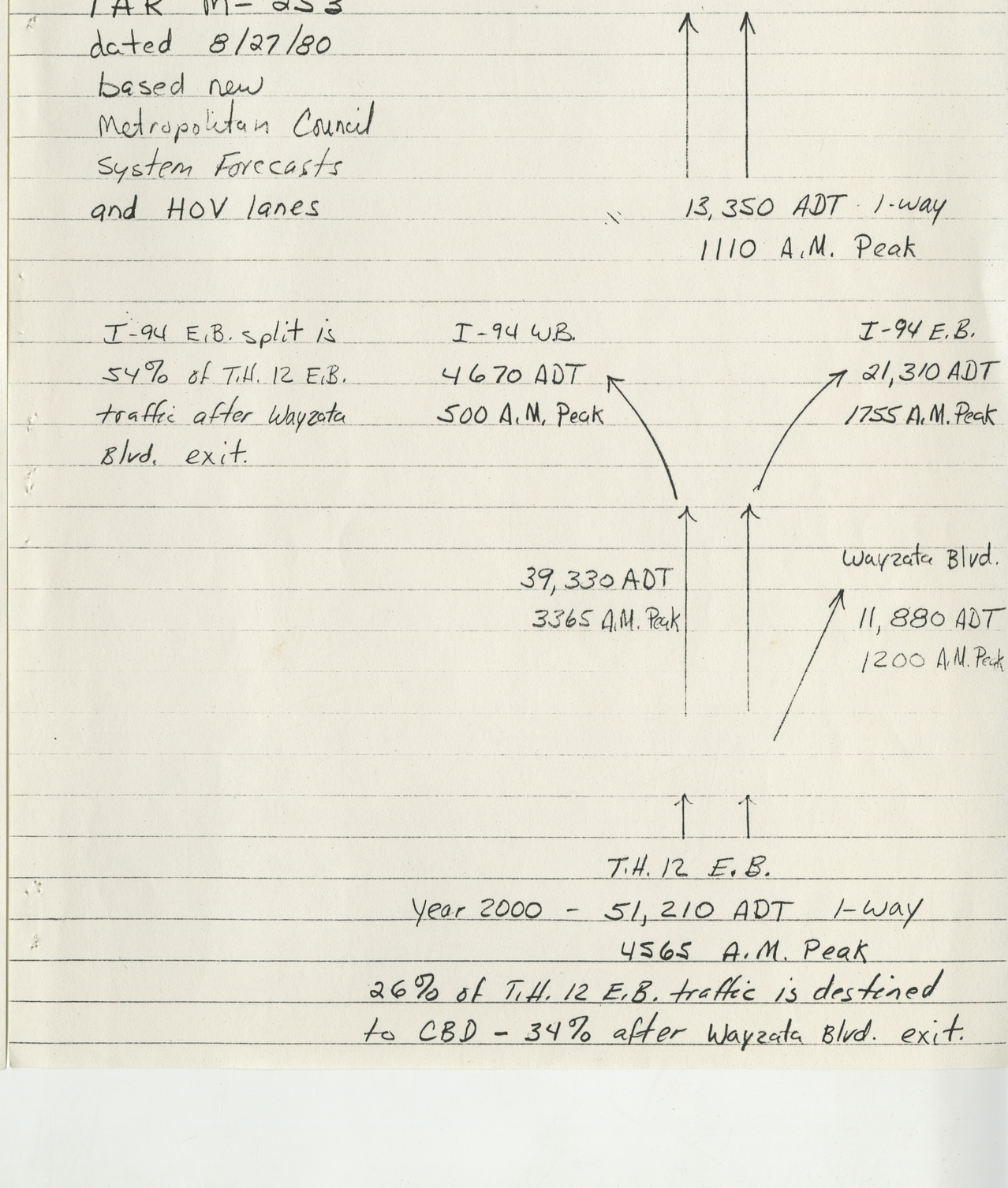
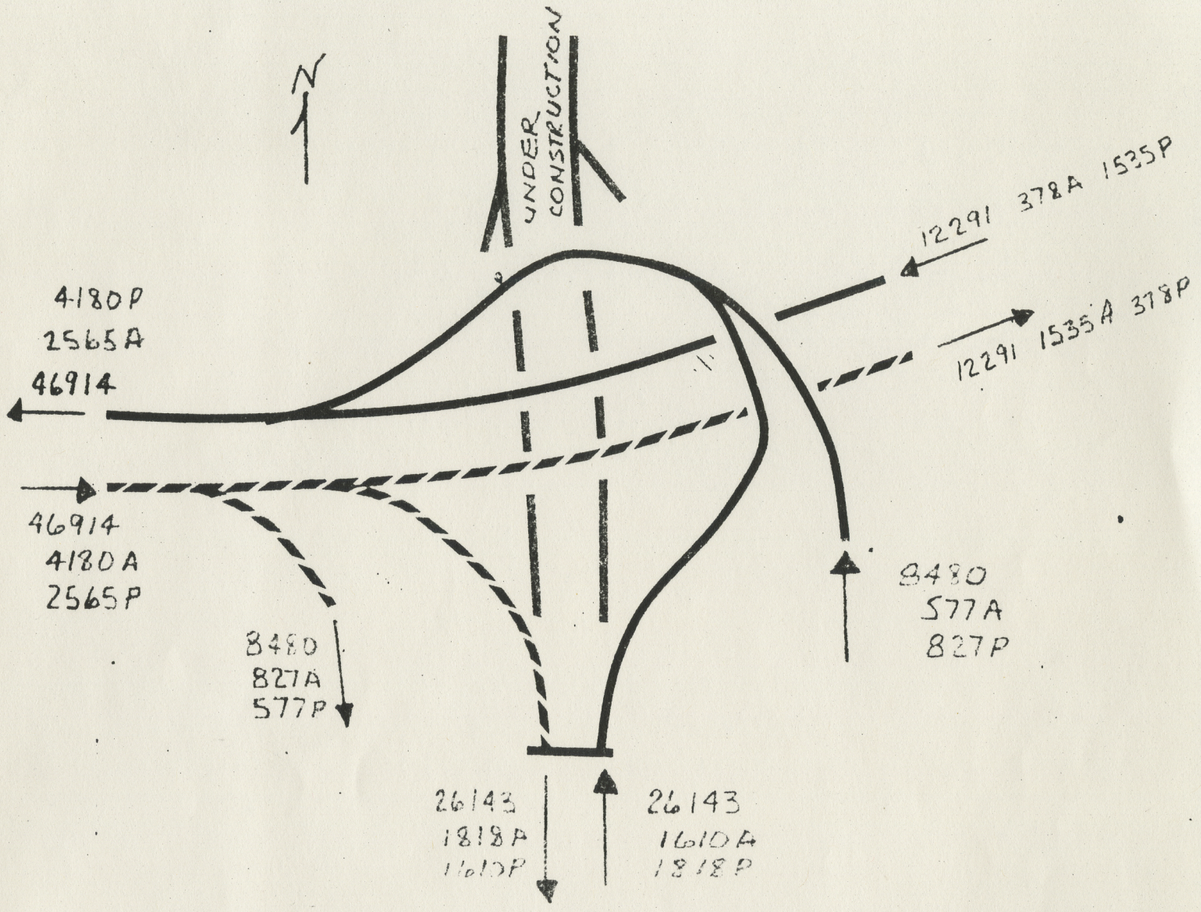


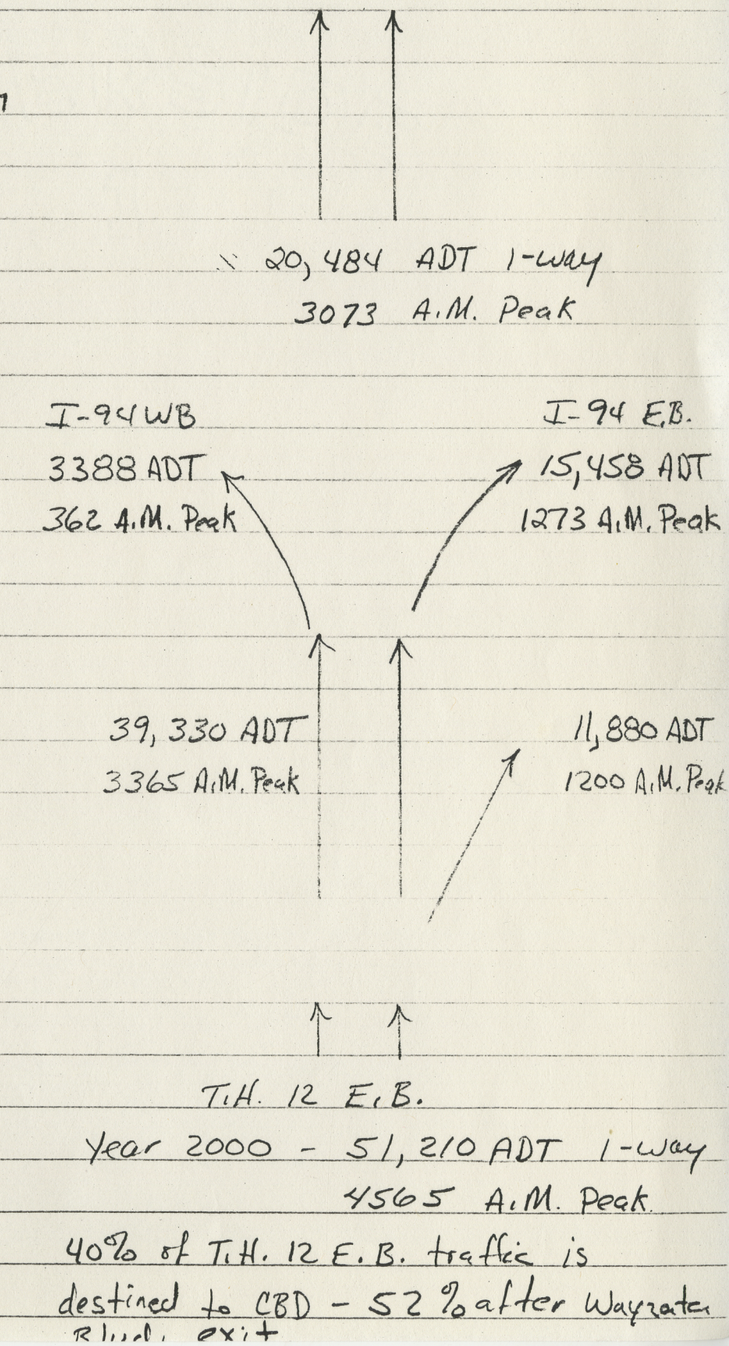
Figure 4 - Current Traffic Counts



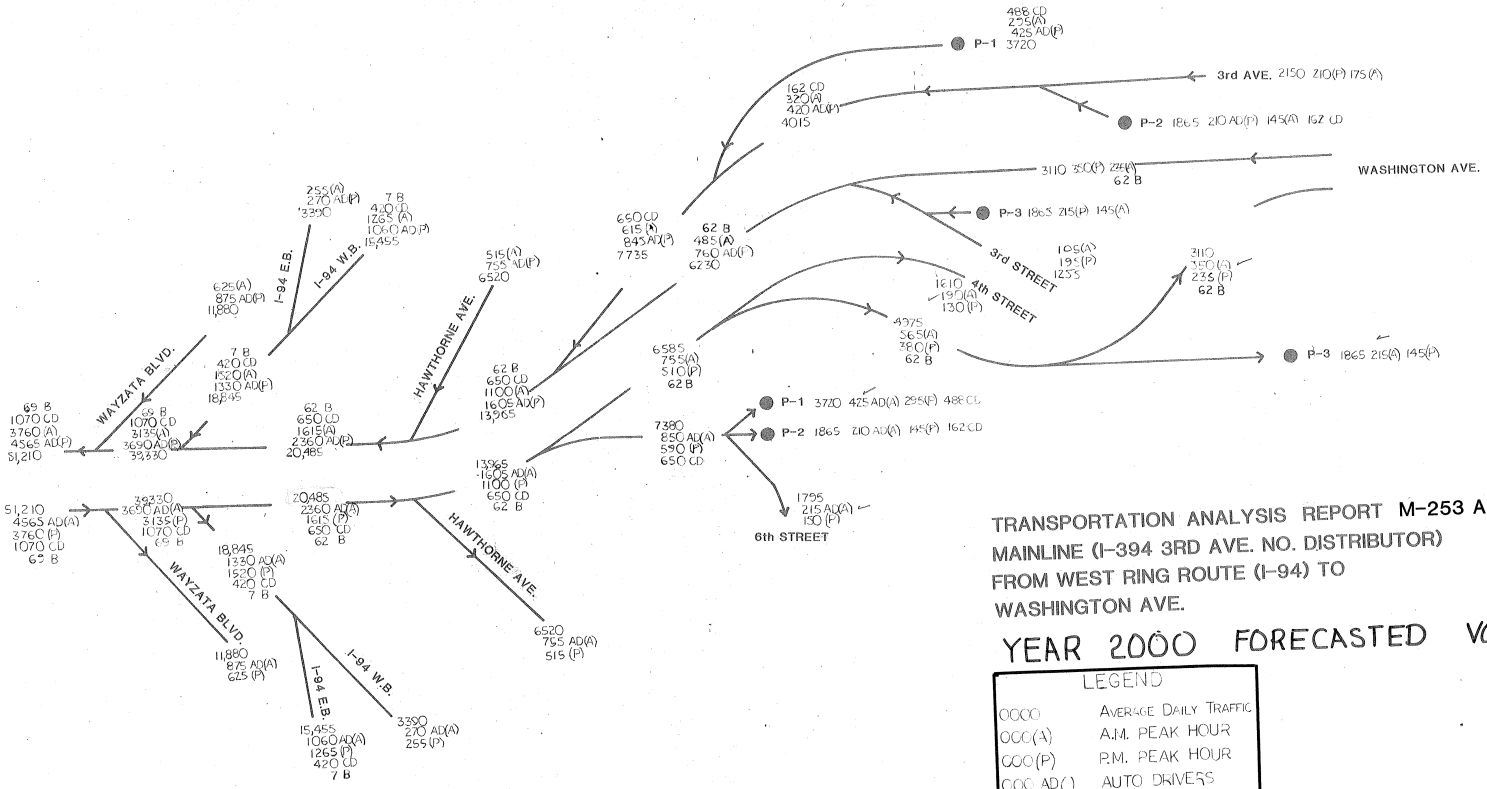
DATA BASED ON 48 HOUR COUNTS TAKEN IN JUNE, 1978.

Figure 5 - T.H. 12 E.B. YEAR 2000 Traffic Forecasts at Hawthorne Interchange Area

Recommended for M-253 addendum



40% of T.H. 12 E.B. traffic is destined to CBD - 52% after Wayzata Blvd. exit



TRANSPORTATION ANALYSIS REPORT M-253 ADDENDUM
MAINLINE (I-394 3RD AVE. NO. DISTRIBUTOR)
FROM WEST RING ROUTE (I-94) TO
WASHINGTON AVE.

YEAR 2000 FORECASTED VOLUMES

LEGEND	
OOOO	AVERAGE DAILY TRAFFIC
OOO(A)	A.M. PEAK HOUR
OOO(P)	P.M. PEAK HOUR
OOO AD( )	AUTO DRIVERS
OOO CD	CARPOOL DRIVERS
OO B	BUSES
P	PARKING RAMPS